

ART. V.—*On a Collection of Hymenoptera made in the Neighbourhood of Wellington by Mr. G. V. Hudson, with Descriptions of New Genera and Species.*

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MR. HUDSON, of Wellington, has been good enough to submit for my examination a small collection of *Hymenoptera*, which contains some new and interesting species. As so little is known regarding the distribution of the New Zealand *Hymenoptera*, I have enumerated all the species.

#### EVANIIDÆ.

*Gasteruption pedunculatum*, Sm. (see Schletterer).

#### BRACONIDÆ.

FHOGRA, gen. nov.

Wings with two cubital cellules; the transverse cubital nerve and the cubitus near it obliterated, so that the first cubital cellule is not separated from the second and from the discoidal. Radial cellule wide, reaching to the apex of the wing; the transverse median nervure is almost interstitial. In the hind wings the radius and cubitus are continued to the end of the wing; the præbrachial nervure is interstitial; the probrachial is widely separated from it. Antennæ filiform. Thorax distinctly trilobate; all the lobes raised and clearly separated. Scutellum roundly convex. Median segment not quite so long as the mesothorax, slightly depressed at the base, and slightly curved upwards; closely rugose. Abdomen with a short projecting ovipositor; the petiole is not quite so long as the second segment; the base behind the tubercles is distinctly narrowed; from there it becomes gradually, but not much, thickened towards the apex; the basal half is distinctly grooved on the lower side. Legs slender.

Allied to *Meteorus*, from which it differs in having only one transverse cubital nervure, and in the cubital cellules being confluent, through the obliteration of the nervures, with the discoidal at the recurrent nervure. We find an obliteration of the nervures and a consequent fusion of the cellules in *Perilitus*, &c.; but in these it is the base of the cubitus which is obliterated, so that the first cubital cellule becomes united with the prædiscoidal, while in the present genus these are separated, the cubitus being distinct at the base.

The radial areolet in the hind wings is not geminated by a transverse nervure.

***Fhogra rubromaculata*, sp. nov.**

Nigra, prothorace mesonotoque brunneis; pedibus testaceis, femoribus posticis fuscis; alis hyalinis, stigmatibus fusco, basi pallido. ♀.

Long., 3.5 mm.; terebra, 1 mm.

Antennæ black. Head smooth, shining, impunctate. Thorax black; the prothorax entirely rufous; the middle lobe of the mesonotum, the sides of the lateral lobes broadly, and the greater part of the mesopleuræ dark-rufous. The three lobes of the mesonotum are clearly separated; the furrows bordering the middle lobe are obscurely striated; a narrow but distinct knee separates the lateral lobes. Metanotum closely and finely rugosely punctured, opaque, and sparsely covered with longish pale hairs. Legs testaceous, brighter at the base; the hinder femora and tibiæ infuscated. Wings hyaline, the nervures fuscous, the stigma pale at the base; the second transverse cubital nervure is fainter than the first; the first is faint below, and the cubitus is faint where it is received. Petiole closely rugosely punctured, dilated at the sides near the base; the tracheal grooves are distinct; the other segments are smooth. The antennæ are 31-jointed. There is no transverse nervure in the hind wings. The basal half of the second abdominal segment is depressed at the sides, and bears there two or three striæ.

OPHIONIDES.

*Paniscus ephippiatus*, Smith.

***Limneria hudsoni*, sp. nov.**

Nigra, pedibus abdomineque rufis; alis hyalinis, nervis nigris; tegulis flavis. ♀.

Long., 10 mm.; terebra, fere 4 mm.

A larger species than *L. zealandica*, Cam., which may be known from it by the hinder coxæ being black and the trochanters yellow.

Antennæ black, the scape covered with white pubescence; below rufous. The clypeus and inner orbits densely covered with white pubescence; the face shagreened, as are also the front and vertex; mandibles and palpi rufous; the mandibular teeth black, their base thickly covered with white pubescence. The eyes have a green tinge. Thorax entirely black, shagreened, the median segment more strongly than the rest; the paraptidal furrows are distinct at the base. At the base of the post-scutellum are two large foveæ. Near the base of the median segment is a transverse keel, which is

roundly curved backwards in the middle; near the apex is, on either side, another keel; and on the apex in the middle are two short oblique ones. The apical furrow on the mesopleura is stoutly crenulated; the central furrow on the mesosternum is smooth. Wings hyaline, with a slight fulvous tinge; the nervures and stigma black, the latter fuscous on lower side; areolet oblique, almost appendiculated; the second transverse cubital nervure longer than the first; the recurrent nervure is almost united to it. Legs entirely ferruginous; the hinder tibiæ darker, almost fuscous in colour. Abdomen ferruginous; the narrowed basal part of the petiole black; the basal ventral segments (beyond the petiole) yellow, the apical black.

**Lissonota rubriplagiata**, sp. nov.

Rufa, capite thoraceque flavo-maculatis; metanoto petioloque late nigris; alis hyalinis, stigmatibus fusco, nervis nigris. ♀.

Long., fere 9 mm.; terebra, 7 mm.

Antennæ black, almost glabrous. Head rufous; the eye-orbits all round, more broadly on the inner than on the outer side and below extending to the mandibles, the clypeus, except at the apex, and the base of the mandibles broadly lemon-yellow; the occiput, the ocellar region, and the front, except at the orbits and near the ocelli, black. Vertex minutely and closely punctured; the front closely transversely striated; on its upper half is a shallow longitudinal furrow. There is a black patch above the sides of the clypeus; the mandibles are broadly yellow, the teeth black, the part behind them rufous; palpi black. Thorax rufous; the middle of the mesonotum between the yellow lines, the sides of the scutellum, the part bordering the post-scutellum, a broad mark on the metanotum roundly narrowed towards the apex and not reaching to the edge of the slope, the middle of the propleuræ, an oblique mark on the base of the mesopleuræ between tubercles, and the lower yellow mark and the oblique slope of the base of the mesosternum, black. On the mesonotum are two yellow lines, dilated outwardly at the base and extending shortly beyond the middle. A mark on the base of the scutellum triangularly incised in the middle, the post-scutellum, the lower third of the propleuræ, a mark on the top in front of the tegulæ, a triangular mark under the hind wings, a mark narrowed at the apex on the lower side of the mesopleuræ at the base, and a large oblique mark of equal width throughout, and extending from the base to the apex on the metapleuræ, lemon-yellow. Legs rufous; the middle coxæ entirely and a large mark on the hinder pair narrowed at the apex lemon-

yellow. Wings clear, hyaline, the nervures black, the stigma fuscous. Abdomen rufous, the basal two-thirds of the petiole and the other segments at the sides broadly black. The anterior coxæ are black above, yellow below. The middle coxæ are yellow, except for a rufous mark, narrowed towards the apex, on the basal two-thirds; the middle trochanters are black, yellow in the middle below; the hinder are entirely black; palpi dark-rufous.

Comes nearest to *L. flavo-picta*, Smith, which has the ovipositor longer than the body, the metanotum without a large black mark, all the coxæ yellow above, the scutellum entirely yellow, &c.

#### DUSONA, gen. nov.

Areolet present, minute; the transverse cubital nervures united at the top. Metathoracic spiracles elongate, about three times longer than broad. Spiracles on petiole placed at the base of the apical third, at the base of the post-petiole. Claws simple. Clypeus not separated from the face by a suture. Mandibles at the apex, with two teeth of equal size. Transverse basal nervure interstitial.

The eyes are distinctly sinuate above the middle on the inner side, and do not quite reach to the base of the mandibles. The mandibles are large, and have on the lower edge a distinct projecting keel on the outer side. The legs are of normal size; the base of the anterior tarsi incised; the tarsi spinose. Scutellum roundly convex, not keeled laterally at the base. The depression at the base of the post-scutellum is distinctly keeled laterally. There are no keels on the median segment, which is obliquely narrowed at the base. Legs normal, the claws simple. Radial cellule wide; the basal and apical obscissæ of the radius distinctly oblique and curved. Areolet small; the recurrent nervure is received in the middle. Petiole long, the post-petiole not much dilated; the apical segments widened; the ovipositor largely projects. There is a short longitudinal furrow on the mesopleuræ; above it, at its apex, is a wider oblique one.

The oval metathoracic spiracles ally this genus to *Campoplex* and *Anomalon*. The former may be readily known from it by the pectinated claws, the latter by the want of an areolet in the wings. *Limmeria*, the only New Zealand genus with which it could be confounded, has round, not oval or elongated, metathoracic spiracles. The abdomen is twice longer than the head and thorax united.

#### *Dusona stramineipes*, sp. nov.

Nigra; mandibularum basi, palpis, femoribus, tibiis, tarsisque anterioribus, basique tiliarum posticarum late, flavis; alis hyalinis, nervis stigmatique nigris. ♀.

Long., 10–11 mm.

Head alutaceous, the face and clypeus minutely punctured, thickly covered with white pubescence. Mandibles, except the teeth, and the palpi yellow. The inner eye-orbits distinctly margined. Clypeal foveæ deep; there is an indistinct one in the middle. Mesonotum minutely and closely punctured; its middle slightly raised at the base. Median segment depressed slightly in the middle, closely transversely striated; the centre with a narrow longitudinal furrow. Pleuræ minutely closely punctured; the propleuræ towards the apex closely striated; the apical furrow deep, crenulated. The four anterior legs are lemon-yellow; the tarsi infuscated, lighter coloured at the base; the hinder legs black, except for a broad lemon-yellow band at the base, extending beyond the middle, but not to the extreme base; the posterior calcaria pallid-testaceous. Abdomen smooth and shining; the apical segments are thickly covered with pale pubescence.

#### TRYPHONIDES.

Mr. Hudson sends a *Bassus*, which is perhaps different from *B. generosus*, Cam. I have a suspicion, however, that *Scolobates varipes*, Smith,\* may be really a *Bassus*. It certainly agrees very closely with *generosus* so far as can be made out from the description given by Mr. Smith, who, furthermore, places it in the *Tryphonides*, while *Scolobates* belongs to the *Ophionides*. *Scolobates intrudens*, Sm.,† is certainly not a *Scolobates*. It may be a *Meteorus*.

The investigation of the New Zealand *Hymenoptera* would be greatly facilitated by a critical examination of the species in the British Museum. At present one is not always sure that they have been correctly referred to the genera as now limited by Hymenopterists.

#### CRYPTIDES.

*Mesostenus albipectus*, Sm. This pretty species is probably common.

#### ICHNEUMONIDES.

##### ***Amblyteles zealandicus*, sp. nov.**

Niger, apice scutelli flavo; abdominis medio rufo; pedibus pallide rufis; coxis trochanteribus apiceque tibiæ posticarum nigris; alis hyalinis, stigmatibus nervisque testaceis. ♂.

Long., 15 mm.

Antennæ stout, distinctly tapering towards the apex. Head entirely black, closely, almost rugosely, punctured; behind almost striated; the ocellar region less closely punc-

\* Trans. Ent. Soc., 1878, p. 3.

† Loc. cit.

tured; the punctures on the clypeus are large and more widely separated than they are on the face. Mandibles rufous before the middle; palpi testaceous, black at the base. Mesonotum closely but not very strongly punctured; the middle of the scutellum is broadly yellow, its apex minutely striated. Median segment coarsely, closely, rugosely punctured; the posterior median area almost square; the apex without central keels. Pleuræ closely and distinctly punctured. Sternum less strongly punctured than the pleuræ. Legs pale-ferruginous; the coxæ and trochanters black; the apex of the hinder femora slightly, of the hinder tibiæ more widely, blackish; the hinder tarsi slightly fuscous. The areolet at the top is as wide as the space bounded by the recurrent and the second transverse cubital nervures; the recurrent is received shortly beyond the middle. Abdomen black; the extreme apex of the petiole and the second and third segments ferruginous; gastracæli deep, smooth.

**Amblyteles hudsoni**, sp. nov.

Ferrugineo; capite thoraceque nigro flavoque maculatis; coxis femoribusque anterioribus flavis, posticis nigro-maculatis; alis hyalinis, stigmatè nervisque fuscis. ♂.

Long., 8 mm.

Antennæ fuscous, paler beneath; the scape yellowish-testaceous, marked with black above. Head rufous; the inner and lower outer orbits, the face, and clypeus yellow; the ocellar region and the front broadly in the middle black; the vertex closely punctured; the depressed front closely transversely striated. Mandibles yellow, the teeth black. Palpi dark-yellow. Thorax, the edge of the pronotum, the tegulæ, tubercles, the lower half of the pleuræ, and the sternum lemon-yellow; the lower part of the propleuræ and of the metapleuræ, the mesopleuræ under the wings, the base and the lower part of the metapleuræ broadly, and the part at the sides of the scutellums black. Mesonotum closely and distinctly punctured. Scutellum sparsely punctured, and with a yellowish tint. Post-scutellum smooth. Median segment shagreened; the depressed base black; supræmedian area distant from the base, large, twice longer than broad, rounded at the top. Petiole smooth, shining, slightly tinted with yellow. The four anterior coxæ and trochanters yellow; the hinder coxæ broadly marked with black. Gastracæli shallow, depressed at the apex.

This species may form the type of a new genus; but, in the absence of a female, I have not ventured to name it. Underneath I give its generic characters.

Areolet large, broad, five-angled. Abdomen with seven dorsal segments, the apical one bluntly rounded; ventral

keel only extending to the middle of the third segment. Median segment areolated completely; spiracles small, oval. Petiole slender, not much dilated at the apex. Scutellum large, not much raised; keeled at the base only; the basal depression semicircular.

The apex of the clypeus is bluntly rounded; the foveæ large. Mandibles with unequal teeth; the tarsi without, or almost without, spines, of normal length and thickness; claws short, simple. Radial cellule wide; the apical obscissa of the radius straight; transverse median nervure received in front of the transverse basal; the furrows on the base of the mesonotum distinct, the sides of the post-scutellum deeply foveate at the base.

COLOBACIS, gen. nov.

Antennæ short and thick, tapering towards the apex; the joints of the flagellum short; the basal about twice longer than broad; the apical and middle broader than long. Occiput margined. The eyes surrounded by a distinct furrow. Clypeal foveæ large. Mandibles with a large upper and a smaller lower tooth; the upper tooth elongate, narrowed and rounded at the apex. Scutellum flat, large, its sides not margined. Post-scutellum depressed laterally at the base, the sides bordered with a keel. The areæ on the median segment all distinctly defined; the lateral tooth large. Spiracles elongate, linear. Areolet five-angled, narrowed above; the base of the cubital and the recurrent nervure with a short nervure; the transverse median nervure received distinctly beyond the basal. Abdomen with seven dorsal segments; the ventral keel extending to the apex of the fourth segment; the apical segments bluntly rounded, more broadly and bluntly than in *Amblyteles*. Post-petiole broadly dilated; its apex with three shallow depressions; the apical ventral segment largely triangularly incised. Ovipositor short.

The obtusely pointed abdomen places this genus in the *Amblypygi*. From *Amblyteles* it may be separated by the much wider post-petiole, by the broader-pointed more ovate abdomen; the antennæ are shorter and thicker; the basal obscissa of the cubitus is more sharply angled. The post-petiole is even broader than in the other section of the group (*Platylabrus* and *Eurylabrus*), from which it differs further in the shorter and thicker antennæ, with the joints shorter compared to their width.

**Colobacis forticornis**, sp. nov.

Niger, pedibus abdominis segmento secundo rufis; pedibus rufis; coxis, trochanteribusque posticis, nigris; alis fulvo-hyalinis, stigmatè costâque fulvis, nervis nigris. ♀.

Long., 14 mm.

Antennæ brownish in the middle beneath; the scape punctured, covered with white hair. Head shining; the raised part of the face closely and strongly, the sides more sparsely, punctured; the clypeus with scattered punctures; both parts are rather thickly covered with brownish-fuscous hair. Mandibles black, broadly reddish in the middle. Palpi dark-testaceous; the basal joints blackish. Thorax black; pro- and meso-notum closely and distinctly punctured; the latter, especially at the base, thickly covered with brownish pubescence. Scutellum with scattered punctures above; the lower half of the sides closely and distinctly punctured. Post-scutellum more closely punctured and more thickly haired; its sides stoutly keeled. The basal area on the median segment striated strongly, at the apex irregularly punctured; the striæ on the middle area transverse, on the lateral more oblique; the supræmedian area slightly broader than long, of equal width throughout; the posterior median area is closely transversely striated, the striæ running into irregular reticulations; the outer areas are more coarsely reticulated. Propleuræ closely punctured, more sparsely at the apex than at the base. Mesopleuræ closely punctured, but not so closely as the propleuræ, and more strongly; the apex depressed; the depression with stout keels. Metapleuræ closely and rather strongly punctured; the middle with fine longitudinal striations. Sternum closely punctured. Legs red; the coxæ, trochanters, and the apex of the hinder femora black. Wings hyaline, with a slight fulvous tinge; the costa and stigma fulvous; the nervures darker. Abdomen shining, black; the second segment entirely rufous; the first petiole finely longitudinally striated; the second segment finely and closely punctured; gastracæli large, shallow, at the base indistinctly striated; the apical segments are thickly covered with black hairs.

DEGITHINA, gen. nov.

♀. Abdomen with eight dorsal segments, the apex rather bluntly pointed. Antennæ longish, not distinctly involute; the joints of the flagellum twice longer than broad; the apical slightly compressed and dilated. Upper tooth of mandibles much larger than lower. Clypeus separated from the face. Head largely developed and obliquely narrowed behind the eyes; the occiput sharply margined. Labrum projecting. Scutellum large, flat or slightly prominent. Post-scutellum depressed laterally at the base. Median segment distinctly areolated; the apex with an oblique, straight slope, clearly separated at the top from the basal part; the supræmedian area large, widely separated from the base of the segment, and reaching to the apex of the slope. Spiracles large, linear.



Ventral keel reaching to the fourth segment; the eighth ventral segment distinct. Areolet five-angled. In the male the ventral keel extends to the apex of the fourth segment; the apical segments bluntly pointed.

The areolet is narrowed at the top; the transverse basal nervure is interstitial; the gastracœli are indistinct; the post-petiole is obliquely raised from the base and apex. The longish antennæ, the obliquely sloped apex of median segment, which is not hollowed in the middle, and the abdomen with eight segments in the female, and with the apex rather bluntly pointed, as in *Amblyteles*, serve to distinguish this genus from *Ichneumon*.

**Degithina buchanani**, sp. nov.

Ferruginea; capite thoraceque nigro- et flavo-maculatis pedibus ferrugineis, coxis posticis supra late flavo-maculatis; alis hyalinis; nervis stigmatæque nigris. ♀.

Long., 16 mm.

Antennæ black, brownish beneath towards the apex; the scape for the greater part rufous. Head rufous, the front and the lower part of the vertex black; yellow arc, an irregular spot, widened at the top and bottom, on the upper inner orbits, the lower outer orbits to the base of the mandibles, an oblique somewhat conical mark on the top behind the ocelli and touching the eyes, and a broad irregular mark on the sides above the clypeus, yellow. The front at the ocelli is irregularly punctured and striated, and with a shallow furrow, broad at the top; there is an elongated fovea above the lower ocellus. The raised central part of the face is punctured; striated laterally; the clypeus is sparsely punctured; mandibles rufous, yellowish beyond the middle. Thorax mahogany-colour, darker on the sides of the mesonotum, the base of the metanotum, and on the sternum. The following parts are yellow, tinged with orange: The edge of the pronotum, its base, a mark, longer than broad and rounded at the apex, on the middle of the mesonotum near the apex, the scutellum, post-scutellum, the greater part of the posterior median area of the metanotum, an irregular mark on the base of the mesopleuræ, rounded above and incised at the apex, a larger one at the apex lower down, and an oblique one slightly incised at the apex on the metapleuræ. The pleuræ smooth, shining; there are some stout, oblique keels under the fore wings; on the lower part of the mesopleuræ are some distinct, elongated, deep foveæ; the apical furrow is crenulated; the metapleuræ sparsely punctured in the middle. The base of the median segment is obliquely depressed in the middle; the posterior median area is longer than broad, slightly and gradually narrowed towards

the apex and rounded at the base; the apex has an oblique slope, is sharply keeled above, but has no central keels. Legs lighter and brighter in tint than the thorax; the four front coxæ below and at the base above, and the hinder part broadly at the base above, yellow. Wings iridescent, hyaline, with a slight, but distinct, fulvous tint; the stigma and nervures black; the former fuscous below; the areolet is much narrowed above; the recurrent nervure is received in the middle. Abdomen deep mahogany-colour throughout, shining, smooth; gastracæli almost obsolete; the sheaths of the ovipositor dark-ferruginous.

*Degithina caroli*, sp. nov.

Nigra, capite thoraceque flavo-maculatis; abdomine rufo; pedibus rufis, coxis flavo-maculatis; trochanteribus posticis nigris; alis hyalinis; stigmatibus nervisque nigris. ♂.

Long., 18 mm.

Antennæ black, the scape yellow beneath. Head black; below the antennæ entirely, a line, dilated in the middle, on the inner orbits above, the lower half of the outer orbits, the mandibles, except the teeth, and the palpi, yellow. Front smooth, shining, impunctate, and with a shallow furrow down the middle; the ocellar region at the sides and in front marked with stout, curved keels. Face rather closely, the clypeus more sparsely, punctured. Thorax shining, smooth, black; two lines on the mesonotum leading into the yellow mark, and the two lateral apical areas of the mesonotum, rufous; the edge of the pronotum broadly, a mark rounded at the base and gradually narrowed to the apex on the apex of the mesonotum in the middle, the scutellum, post-scutellum, the posterior median area of the metanotum, the tubercles, a large irregular mark on the base of the mesopleura, a smaller one, triangularly narrowed above, and a large mark following the curve of the keel on the metapleuræ, yellow. Mesonotum sparsely punctured. Scutellum roundly convex, sparsely punctured. Metanotum black; the posterior median area orange-yellow, twice longer than broad, of nearly equal width throughout; there are three apical areas; the central is wide and of equal width throughout. There is a rufous line below the yellow one on the pronotum; the lower part of the propleuræ rufous, yellow at the base and apex; the lower part of the mesopleuræ and the greater part of the mesosternum and the apex of the metapleuræ rufous. Wings hyaline, with a fulvous tinge; the stigma and nervures black. Legs rufous; the four anterior coxæ and trochanters yellow; the hinder coxæ rufous, broadly yellow at the base above and at the apex below; the trochanters rufous, black at the base. Abdomen ferruginous, smooth, and shining; gastracæli shallow, smooth.

**Degithina davidi**, sp. nov.

Ferruginea; facie, scutello, post-scutello, metanoti basi, late, mesopleuris, petioleque, flavis; pedibus rufis; alis hyalinis, nervis stigmatæque nigris. ♂.

Long., 13 mm.

Head rufous, below the antennæ yellow. Mandibles yellow, their teeth black; palpi rufo-testaceous. The depressed front smooth and shining, the sides and lower part of the ocellar region striated; the upper part of the front with a wide furrow. Face distinctly and closely punctured; the clypeus much more sparsely and indistinctly punctured. Thorax rufous; the lower half of the propleuræ, the upper part and apex of the mesopleuræ, the base and lower part of the metapleuræ more broadly, the space at the sides of the scutellums, the central apical area, and the sides at the apex of the metanotum, black; a spot on the base of the propleuræ, the greater part of the mesopleuræ, of the metapleuræ, the scutellum, post-scutellum, and the base of the metanotum to the top of the apical slope, yellow. Mesonotum and scutellum sparsely punctured; the basal half of the median segment has no areæ; on the apex are three, the central being slightly wider at the top than at the bottom; pleuræ smooth and shining. Legs uniformly rufous. The recurrent nervure is received shortly beyond the middle. Abdomen smooth and shining; gastracæli shallow, smooth.

**Degithina hectori**, sp. nov.

Capite thoraceque brunneis, flavo-maculatis, abdomine nigro, apice petioli rufo; pedibus rufis, coxis trochanteribusque nigris, coxis posticis flavo-maculatis. ♀.

Long., 13 mm.

Antennæ black, slightly brownish beneath towards the apex; the apex of the scape rufous beneath. On the dark mahogany-coloured head, the clypeus, lower part of the face, the front, the ocellar region, and the occiput are black; the sides of the face broadly, the upper orbits on the inner side broadly—the marks obliquely narrowed from the middle towards the base and apex—and a large mark near the centre of the outer orbits—rounded and slightly narrowed behind—yellow, mixed with chocolate. The face is distinctly, but not very closely, punctured, more closely and distinctly in the middle than at the sides; the clypeus is sparsely punctured; the projecting clypeus is smooth, except for a narrow band of minute punctures on the apex; it is rufous, and fringed with long fulvous hairs. The front and vertex have a few scattered punctures in the middle; the former is deeply furrowed down the middle. There is a deep furrow surrounding the front ocellus. On the dark-chocolate thorax the following

parts are yellow, suffused with rufous: A broad band on the upper part of the pronotum, broader behind than before; a moderately large mark, longer than broad, triangularly narrowed behind, on the apex of the mesonotum in the middle; the scutellum, post-scutellum, the greater part of the posterior median area on the median segment; a large oblique mark, rounded at the apex, on the lower part of the mesopleuræ at the base; a slightly smaller one on the apex, placed lower down and obliquely, irregularly narrowed at the base; and an irregular one on the metapleuræ in the middle at the apex orange-yellow; the sides and base of the mesonotum, the sides near the scutellums, the keels on the median segments, the sides and edges of the pleuræ, and the centre and apex of the mesosternum. The areæ are distinct and complete; the posterior median is widely distant from the base, is longer than broad, rounded at the base, and slightly narrowed towards the apex. The greater part of the coxæ and trochanters are black; the posterior coxæ are broadly rufous at the base above and behind, and with a large yellow mark on the base above. Wings hyaline, iridescent; the costa, stigma, and nervures black; the wings have at the base a fulvous tinge. Abdomen black, smooth, and shining; the petiole rufous, black at the base and more narrowly at the apex; gastracæli shallow, smooth.

***Ichneumon pyrastis*, sp. nov.**

Ferrugineo, capite thoracèque flavo-maculatis, mesonoto nigro lineato; alis fulvo-hyalinis, nervis nigris, stigmatibus fusco. ♂.  
Long., 11 mm.

Antennæ as long as the body, the scape yellow, the flagellum brownish beneath, distinctly tapering towards the apex. Head black; the inner orbits, broad above, narrower below, the outer orbits in the middle, the sides of the clypeus broadly and the apex narrowly yellow; the face and clypeus and the head behind—outside the yellow line—rufous. The vertex in front of the ocelli shagreened; the front very smooth and shining, and with a wide shallow furrow in the middle. Face closely punctured, the clypeus with the punctures larger and more widely separated, the apex smooth. Mandibles yellow, the teeth black, and with a rufous band behind them. Palpi testaceous, tinged with yellow. Thorax rufous; the edge of the pronotum, the scutellum, except for a triangular mark on either side at the base, the post-scutellum, and tubercles, yellow; a broad line down the middle of the mesonotum, its sides more narrowly, the scutellar depression, the part between the wings and the scutellums, the propleuræ broadly at the base, the upper part of the mesopleuræ, and the base and apex more narrowly, and the metapleuræ, except

for a broad rufous band—narrowest at the base—in the middle, black. Mesonotum closely punctured; the apical half of the scutellum closely punctured. The median segment obscurely punctured and shagreened; the middle at the apex finely transversely and irregularly striated; the supramedian area is elongated, reaches to the middle of the segment, and is narrowed slightly on the basal half; the base is rounded, and reaches to the top of the basal slope. Mesopleuræ closely punctured; the metapleuræ smooth, except for some minute striæ in the middle. Legs rufous; the four anterior coxæ broadly yellow on the outer side at the base. The areolet is moderately large, five-angled, narrowed at the top, being there half the length of the space bounded by the second transverse cubital and the recurrent nervure, which is received shortly beyond the middle. Abdomen shining, impunctate; the apex rather bluntly pointed; gastraceli shallow, smooth; the ventral keel obsolete.

Resembles *I. richardi*; may be easily separated from it by the longer and narrower supramedian area, by the apex of the yellow lines on the mesonotum, and of yellow on the mesopleura, and by the apex of the abdomen being black.

#### **Ichneumon frederici, sp. nov.**

Ferrugineo, maculis thoracis abdominisque apice nigris; scutello, post-scutello basique coxarum posticarum flavis; alis hyalinis, nervis stigmatateque testaceis. ♀.

Long., 9–10 mm.

Antennæ stout, thickly covered with a white pile, dark-ferruginous, the apex of the flagellum darker. Head dark-ferruginous; the front black, the inner orbits above narrowly yellow; the vertex distinctly and closely punctured; the front smooth and shining; the face less strongly and closely punctured; the clypeus smooth. Mandibles ferruginous, the teeth black. Thorax ferruginous, the metanotum lighter in tint than the mesonotum; the scutellum, except narrowly at the base, and the post-scutellum bright lemon-yellow; the greater part of the pro- and meta-pleuræ and the upper part of the mesopleuræ black. Mesonotum closely and distinctly punctured; the scutellum flat, sparsely punctured; the parts at its sides black; there are no foveæ at the base of the post-scutellum. Median segment sparsely punctured laterally; the supramedian area is widely separated from the base; it is, if anything, wider than long, and is rounded behind; the posterior median area is distinctly and roundly hollowed and closely and minutely punctured; the lateral apical areas are also minutely and closely punctured. Propleuræ closely punctured; the mesopleuræ sparsely punctured below; the metapleuræ smooth and impunctate. Mesosternum finely and

rather sparsely punctured. Wings hyaline, the stigma testaceous, the nervures darker; areolet narrowed at the top, being there as wide as the space bounded by the recurrent and the second transverse cubital nervures; the recurrent nervure is received at the base of the apical third of the areolet; the second transverse cubital nervure is largely bullated. Except for an oblique large oval mark on the hinder coxæ behind, the legs are ferruginous; the tibiæ and tarsi are thickly covered with a pale down. Abdomen smooth and shining; the greater part of the four apical segments black; the gastracœli obsolete.

***Ichneumon richardi*, sp. nov.**

Ferrugineo; orbitis oculorum, linea pronoti, lineis duobus mesonoti, mesopleuris late subtus, scutello, post-scutelloque flavis, maculis mesonoti abdominisque apice nigris; alis hyalinis, nervis stigmatæque nigris. ♂.

Long., 9–10 mm.

Antennæ deep-black; the scape yellow beneath. Head dark-ferruginous; the ocellar region darker; the inner orbits, the lower outer ones, the face, and clypeus lemon-yellow; the vertex shagreened. On the thorax, the greater part of the propleuræ, the upper part of the mesopleuræ, the greater part of the metapleuræ, three large marks on the mesonotum, and the parts at the sides of the scutellum and post-scutellum are black; there is a yellow line on the pronotum, two irregular lines on the middle of the mesonotum, the lower half of the mesopleuræ, the scutellum to shortly beyond the middle, and the post-scutellum lemon-yellow. Mesonotum closely and distinctly punctured. Scutellum almost impunctate. Median segment shagreened, punctured at the base; the posterior median area is longer than broad, wider at the base than at the apex, and rounded at the base. Wings hyaline, iridescent; the stigma and nervures black; the areolet narrowed at the top; the nervures almost touching; the recurrent nervure is received shortly beyond the middle. Legs ferruginous; the four anterior coxæ and trochanters yellow. Abdomen shagreened, the apical three segments for the greater part black; the gastracœli shallow, indistinct.

***Ichneumon wellingtoni*, sp. nov.**

Niger, pedibus rufis, coxis trochanteribusque nigris; alis fulvo-hyalinis, stigmatæ fusco. ♀.

Long., fere 9 mm.

Antennæ black; the flagellum more or less fuscous beneath; the scape with a rufous mark on the apex beneath; closely punctured, and thickly covered with a pale down. Head black; the labrum and a line along the middle of the

inner orbits yellow. Front and vertex closely punctured and covered with a pale down; the frontal depression smooth and shining; the face closely, the clypeus more sparsely, punctured. Mandibles broadly dark-rufous in the middle; the palpi testaceous, black at the base. Mesonotum closely, but not strongly, punctured; the basal furrows transversely striated. Scutellum and post-scutellum almost impunctate; the base of the post-scutellum depressed at the sides; the depression at its sides stoutly striated. Median segment strongly transversely shagreened, most strongly on the apical slope; its base obliquely depressed in the middle; the supra-median area elongate; the lateral nervures not continued to the base, the transverse keel being also obsolete, so that the area is open at the base; all the other areas are complete. Pleuræ shining, closely punctured; the propleuræ stoutly striated at the apex. Wings fulvo-hyaline, the fulvous tinge more distinct at the base; the basal nervures fulvous, the apical darker; the stigma fuscous; the areolet narrowed at the top, being there less in length than the space bounded by the recurrent and the second transverse cubital nervures; the recurrent nervure is received shortly beyond the middle; the transverse median nervure is received shortly behind the transverse basal. Legs reddish-fulvous; all the coxæ and trochanters black. Abdomen black; the gastracæli and a narrow line on the apex of the second segment reddish; the petiole aciculated; the other segments smooth and shining; gastracæli shallow, closely aciculated; the ovipositor black, rufous in the middle.

The antennæ are slightly compressed and thickened towards the apex; the basal joints of the flagellum are twice longer than broad; the labrum projects; the mandibles have the upper tooth much longer and sharper than the lower; the scutellum is very flat; the sheaths of the ovipositor are longer than the apical two joints united, and project largely; the last segment is large; the abdomen very smooth and shining; the scutellum is twice longer than broad, flat, not keeled at the base.

#### ZESTOCORMUS, gen. nov.

Abdomen with eight dorsal segments; the ventral keel extends to the fifth segment, the second to fifth segments projecting laterally at the apex; the sheaths of the ovipositor projecting, in length nearly as long as the apical three segments united. Antennæ thickened beyond the middle; the basal joints of the flagellum much longer than broad. Clypeus separated from the face; its sides at the base deeply foveate. The upper tooth of the mandible distinctly larger and longer than the lower. Face roundly projecting in the

middle. Labrum not projecting. Areolet 5-angled, narrowed towards the top; the base of the cubitus without a branch; the transverse basal nervure interstitial. The depression at the base of the scutellum is wide and deep; sharply keeled; the base of the post-scutellum deeply foveate laterally. Median segment distinctly areolated; the supramedian area widely separated from the base; spiracles elongated, rounded at the base and apex. Legs of normal length; the hinder tibiæ distinctly narrowed and twisted at the base, and not much shorter than the tarsi, which have the joints spinose at the apex; claws large, simple; the inner joint of the fore calcaria is stout, curved, and bluntly pointed.

The petiole is broader and more dilated at the apex than in the *Oxygygi*, approximating more to *Eurylabus*, &c.; it is even broader than in *Eurylabus*, and is differently formed, being distinctly and somewhat triangularly raised in the middle. The antennæ are involute, stout, dilated somewhat, and compressed towards the apex; the joints of the flagellum are not greatly elongated. The insect is very smooth and shining, and is almost devoid of pubescence.

**Zestocormus melanopus**, sp. nov.

Niger, nitidus, orbitis oculorum flavo-maculatis; alis hyalinis, nervis stigmatæque nigris; abdomine rufo, petiolo nigro. ♀.

Long., fere 10 mm.

Antennæ black, the flagellum fuscous beneath beyond the middle. Head black; a yellow line above and below on the inner orbits; the face and clypeus sparsely punctured; the ocellar region aciculated; below the ocelli is a band of curved fine striæ; the front has a shallow narrow furrow in the middle. Shortly behind the ocelli is a small yellow mark touching the eyes. Mandibles broadly rufous in the middle. Palpi black. Thorax entirely smooth and shining; the scutellum has a fuscous tinge in the middle. The supra-median area is widely distant from the base of the segment, is longer than broad, reaches to the base of the apical slope, and is rounded behind. Legs black; the tarsi more or less dark-fuscous; the apices of the joints spinose; the spines rufous. Areolet narrowed at the top, being there as long as the space bounded by the recurrent and the second transverse cubital nervures; the recurrent nervure is received at the base of the apical third of the cellule. Abdomen smooth and shining; dark-rufous; the petiole black; the longish sheaths of the ovipositor black.

POMPILIDÆ.

*Salix monachus*, Sm.



## LARRIDÆ.

*Pison morosus*, Sm.*Pison pruinus*, Cam.*Tachytes sericops*, Sm.

## CRABRONIDÆ.

*Rhopalum perforatum*, Sm.

## FORMICIDÆ.

*Aphenogaster antarctica*, Sm.*Huberia striata*, Sm.

*Prenelepis longicornis*, F. Not hitherto recorded from New Zealand. It is now practically of universal distribution in the warmer parts of the world.

*Monomorium nitidum*, Sm.*Ponera castanea*, Sm., Mayr.

## ART. VI.—On the New Zealand Lancelet.

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[Read before the Otago Institute, 13th November, 1900.]

## Plate I.

SOME years ago a couple of specimens of a lancelet were collected on the east coast of the North Island, and have since been deposited in the Colonial Museum. They were described by Captain Hutton in his "Fishes of New Zealand," published in 1872 by the Colonial Museum and Geological Survey Department, under the title "*Branchiostoma ianceolatum*, Yarrell."

At that period, and for many years subsequent to that date, all lancelets were regarded as belonging to one and the same species, and were known usually as "*Amphioxus*," more properly as "*Branchiostoma*." But as material has been accumulated from various seas, and examined and compared with care, it has become evident that at least three subgenera must be erected for the ten well-characterized species—viz., *Branchiostoma*, *Asymmetron* (Andrews, 1893), from the Bahamas, and *Heteropleuron* (Kirkcaldy, 1895\*); the last being characterized by the one-sidedness of certain structures—viz., the genital glands exist on the right side only, and the right

\* Quart. Journ. Mic. Sci., xxvii., p. 303.